Report to the Minister of Conservation

on

Public Meetings:

Draft Environmental Impact Statement Guidelines for the Wuskwatim Generation and Transmission Projects

Manitoba Clean Environment Commission

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Chairman's Letter

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Honourable Oscar Lathlin
Minister of Conservation
Room 333 Legislative Building
450 Broadway Avenue
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Minister:

At your request, the Clean Environment Commission conducted public meetings on the draft *Environmental Impact Statement Guidelines* for the proposed Wuskwatim generation and transmission projects. The purpose of these meetings was to provide information to the public on the draft *Guidelines*, and to receive their concerns, comments and questions.

The following report provides an account of the public meetings, summarizes observations made and conclusions drawn, and presents recommendations to address issues raised by the public and the Commission respecting these important *Guidelines*.

Respectfully,

Terry Duguid, Chairman

Executive Summary

At the request of the Minister of Conservation, the Manitoba Clean Environment Commission (CEC) convened a series public meetings on the draft Environmental Impact Statement (EIS) guidelines for the proposed Wuskwatim Generation and Transmission projects during February 2002. The sessions were held in Thompson, Nisichawayasihk Cree Nation (Nelson House), Opaskwayak Cree Nation (The Pas) and Winnipeg, and were attended by over 220 people including First Nation organizations, environmental groups, businesses, consultants, local residents and students. The Commission received 23 written submissions and oral statements, and heard numerous questions and comments on the guidelines. Summaries were prepared after each meeting and they were posted on the Commission's Web site.

Manitoba Hydro and the Nisichawayasihk Cree Nation are proposing development of a hydroelectric generating station at Taskinigup Falls on Wuskwatim Lake located about 50 kilometres southwest of Thompson. The Wuskwatim generation station would provide approximately 200 megawatts of new electrical generating capacity. Separate Wuskwatim transmission facilities would convey power from the Wuskwatim generating station to the existing electrical transmission system. New 230 kilovolt transmission lines would connect a sub-station at Wuskwatim to other stations on the transmission system. Points of connection to the system would be at Thompson, Snow Lake and Opaskwayak.

The Wuskwatim generation and transmission projects are subject to environmental assessment requirements of the *Canadian Environmental Assessment Act* and Manitoba's *Environment Act*. Accordingly, the assessment of the projects falls under the *Canada-Manitoba Agreement on Environmental Assessment Cooperation*. A federal-provincial Project Administration Team, lead by Manitoba, was formed to manage the cooperative environmental assessment of the Wuskwatim projects. The Project Administration Team drafted the EIS guidelines for the projects based on scoping documents prepared by a joint Manitoba Hydro and Nisichawayasihk Cree Nation study team. The Project Administration Team will finalize the guidelines after consideration of recommendations from the Clean Environment Commission, advice from the Technical Advisory Committee and comments received directly from the public.

Participants at the Commission's public meetings expressed various comments and concerns about the draft EIS guidelines for the proposed Wuskwatim generation and transmission

projects. They were both supportive and critical of the guidelines, but generally supported the proactive approach taken by government to consult prior to finalizing the guidelines. First Nation representatives spoke about how past hydroelectric projects in northern Manitoba have affected their lands, resources, and way of life, and of the importance of including Aboriginal traditional knowledge in the conduct of environmental assessments. They asked that the geographic scope of the assessment be expanded to include areas affected by previous hydroelectric projects as well as areas potentially affected by the Wuskwatim projects. First Nation representatives also commented on the importance of baseline information and environmental monitoring.

Environmental organizations requested that the EIS guidelines outline the environmental policy framework for the environmental assessment, establish standards of practice to be achieved and require that the effects of climate change be addressed. They questioned the need and purpose for the projects and suggested that alternatives to the projects and demand side management be considered during the environmental assessment. Several of the participants also commented that the guidelines did not provide specific direction in areas such as environmental assessment methods, cumulative effects assessment and public consultation requirements.

The observations and recommendations outlined in this report serve as advice from the Clean Environment Commission to the Minister of Conservation and the Project Administration Team regarding the EIS guidelines for the Wuskwatim generation and transmission projects. In total, nineteen separate recommendations are provided on the guidelines, which include the following:

- Improved comprehension, greater level of specification and enhanced definition of Manitoba's environmental policy framework.
- Assessment of the Wuskwatim projects in relation to other hydroelectric developments in northern Manitoba and provision of more descriptive information on the proposed projects.
- Broader geographic scope of the environmental assessment, establishment of baseline conditions, assessment of both direct and indirect effects, support of environmental monitoring programs, use of Aboriginal traditional knowledge and adoption of best practice standards.
- Consideration of the effects of the project on climate change, and the effects of climate change on the project's operation over the longer term.

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Introduction

Proposed Projects

Manitoba Hydro and the Nisichawayasihk Cree Nation (NCN) are considering development of the Wuskwatim generation project and associated infrastructure in the Nelson House Resource Management Area located in north-central Manitoba. The Wuskwatim generation station would be located at Taskinigup Falls on Wuskwatim Lake, which is about 50 km southwest of the City of Thompson. The generation station would provide approximately 200 megawatts of new electrical generating capacity to Manitoba Hydro's system.

The Wuskwatim transmission project facilities would convey power from the proposed Wuskwatim hydroelectric generating station to the existing Manitoba Hydro electrical transmission system. New 230 kilovolt transmission lines would connect a sub-station at the Wuskwatim site to other stations on Manitoba Hydro's transmission system. Points of connection to the existing system would be at Thompson, Snow Lake and Opaskwayak. Transmission facilities would be located both in and beyond the Nelson House Resource Management Area.

Environmental Assessment Process

The Wuskwatim generation project will require a comprehensive study environmental assessment under the *Canadian Environmental Assessment Act*. The generation station is also a Class 3 development according to the *Classes of Development Regulations* under Manitoba's *Environment Act*. The Wuskwatim transmission project is listed as a Class 2 development in the *Classes of Development Regulations* and it may require a screening or be part of a comprehensive study environmental assessment.

Under the *Canada-Manitoba Agreement on Environmental Assessment Cooperation* the parties have agreed that a cooperative environmental assessment will be undertaken for the Wuskwatim generation and transmission projects. Manitoba has been designated as lead party for the environmental assessment and a federal-provincial Project Administration Team has been formed to manage the assessment of the projects.

A Manitoba Hydro and Nisichawayasihk Cree Nation study team drafted scoping documents that provided background information for the Project Administration Team in the preparation of draft

Environmental Impact Statement (EIS) guidelines for the projects. The guidelines identify specific items that both Manitoba and Canada require in a cooperative environmental assessment. They also outline reporting and other requirements. The Project Administration Team will finalize the guidelines after receiving recommendations from the Clean Environment Commission, advice from the Technical Advisory Committee and comments they receive directly from the public.

The Minister of Conservation is expected to approve the final EIS guidelines for the Wuskwatim projects in the spring of 2002. Manitoba Hydro proposes to complete environmental and other studies and prepare the EIS for the hydroelectric projects by the fall of 2002. Public hearings on the projects are scheduled for the Public Utilities Board over the winter of 2002-03 and for the Clean Environment Commission in the spring or early summer of 2003.

Public Meetings

In January 2002, the Minister of Conservation asked the Clean Environment Commission (CEC) to assist with the development of guidelines for the preparation of an EIS for both the Wuskwatim generation station and transmission projects. A panel of Commissioners, consisting of Terry Duguid (Chair), Archie Phillips and Connie Pringle was struck to conduct public meetings and prepare a report on the draft EIS guidelines. Archie Phillips withdrew from the panel after the public meetings and did not contribute to the preparation of the report.

Public meetings were held in Thompson, Nisichawayasihk Cree Nation (NCN), Winnipeg and Opaskwayak Cree Nation (OCN) on February 11, 12, 18 and 19, 2002, respectively. The objectives of the public meetings were to provide information to the public on the draft EIS guidelines, receive comments and questions on the guidelines, and to enable preparation of a report with recommendations to the Minister of Conservation.

Purpose of Report

The purpose of this report is to provide an accurate summary of the comments and concerns received by the Commission from the public on the draft EIS guidelines, and to provide observations and recommendations to the Minister of Conservation based on that information. Public comments on other matters such as the federal-provincial environmental assessment process and administrative procedures were determined to be beyond the scope of this the report and were therefore not included.

Wuskwatim Projects

The Wuskwatim projects comprise a generating station and associated infrastructure, a transformer/switching station and transmission lines to link the new generator at Wuskwatim to the existing transmission system. The proposed Wuskwatim hydroelectric projects would bring electricity to market in late 2009. Since Manitoba customers would not need this power until about 2018, energy from the projects would be initially sold to export markets outside Manitoba.

Wuskwatim Generation Project

The Wuskwatim generating station and dam would be located at Taskinigup Falls where Wuskwatim Lake flows into the Burntwood River (Manitoba Hydro – NCN Newsletter No. 1, 1999). The proposed low head generating station would produce about 200 megawatts of electricity. Manitoba Hydro reports that the reservoir would flood less than 0.5 km^2 of land between Wuskwatim Lake and Taskinigup Falls, and the flooded area would be cleared prior to operation of the generation station. Water levels on Wuskwatim Lake are to be stabilized at or slightly below 234 m above sea level. Manitoba Hydro predicts that water level changes would extend upstream to near Early Morning Rapids and downstream to Opegano Lake under most flow conditions.

The Wuskwatim generating station would also require a camp for construction workers, an access road to the site and construction power. The construction workforce for the Wuskwatim generation station is expected to peak at about 350 seasonal jobs and to extend over six years.

Wuskwatim Transmission Project

The Wuskwatim transmission project facilities would provide for the transmission of power from the proposed Wuskwatim generating station to the existing Manitoba Hydro electrical transmission system (Manitoba Hydro – NCN Newsletter No. 1, 1999). At the same time, the project would provide transmission system improvements that are independent of the requirements of the proposed generating station.

Manitoba Hydro proposes development of new transmission lines and a transformer/switching station to link the proposed electronic generator to the existing transmission system. A new transmission sub-station would be required at the Wuskwatim site to provide for voltage transformation and switching. Electricity would be received from the generators and transformed

at the sub-station to higher voltages that are necessary for transmission into the existing Manitoba Hydro system.

Proposed 230 kV transmission lines would connect the sub-station at the Wuskwatim site to other stations on Manitoba Hydro's transmission system. Manitoba Hydro is proposing to connect to the existing system at Thompson, at a proposed new transformer/switching station south of the city to be called Birchtree Station, near Snow Lake, at the existing Herblet Lake Station on the north side of the community, and at Opaskwayak, at the existing Rall's Island Station. Manitoba Hydro advises that the transmission line connections between Herblet Lake Station and Rall's Island Station would be required in the future, independent of development of the Wuskwatim generation project, to improve the existing regional electrical-transmission system.

Manitoba Hydro is conducting a site selection and environmental assessment process for the transmission lines. The process includes discussions with affected communities, resource users, interest groups and government at key junctures. Alternative transmission line routes are selected and compared based on the avoidance of sensitive areas. A preferred route will be chosen, which minimizes the effects on regional and locally sensitive features and maximizes benefits.

Employment opportunities will also be available for construction of the transmission facilities. The number of winter jobs would range between 25 and peaking possibly at 200 in other years.

Draft Environmental Impact Statement Guidelines

In October 2001, the Nisichawayasihk Cree Nation – Manitoba Hydro joint study team drafted scoping documents for the proposed Wuskwatim generation and transmission projects. The scoping documents provided background information for consideration by the federal-provincial Project Administration Team in the preparation of draft EIS guidelines for the proposed projects.

The draft EIS guidelines outline the intent, scope and requirements for the EIS of the proposed Wuskwatim projects. Copies of the guidelines are provided in Appendix A.

Public Meetings

Notification

Manitoba Conservation announced commencement of the environmental assessment and review process on proposals received from Manitoba Hydro to construct and operate the Wuskwatim generation station and transmission projects on December 11, 2001. The notice also stated that the Manitoba Clean Environment Commission would hold public hearings on the proposals. Subsequently, the Minister of Conservation asked the Clean Environment Commission to assist in the development of guidelines for the preparation of an EIS for the both the generation station and the transmission projects. Manitoba Conservation also provided public notice of the Wuskwatim generation (File 4724.00) and transmission (File 4725.00) projects.

The Clean Environment Commission placed public meeting notices in Winnipeg and northern newspapers during January 2002. These notices appeared in the *Winnipeg Free Press, Thompson Nickel Belt News, The Pas Opasquia Times, Flin Flon Northern Visions, Snow Lake News, Leaf Rapids Star, "Weetamah", "Drum" and "Grass Roots".* In addition, about 325 notices were mailed directly to government offices, businesses, organizations and individuals. Notification of the meetings and links to download the draft EIS guidelines was also provided on the Manitoba Conservation and Clean Environment Commission Web sites.

Schedule and Format

Public meetings were held in Thompson, Nisichawayasihk Cree Nation, Winnipeg and Opaskwayak Cree Nation on February 11, 12, 18 and 19, respectively. The Thompson, Nisichawayasihk Cree Nation and Opaskwayak Cree Nation meetings were held in the afternoon while the Winnipeg meeting included both afternoon and evening sessions.

The format for the public meetings consisted of introductory remarks by the Chair of the Clean Environment Commission followed by presentations on the Wuskwatim projects and the environmental assessment process by Manitoba Conservation, and submissions, statements and questions by those attending. The structure of the meetings was kept informal to encourage questions and comments from presenters and the audience.

The Thompson, Winnipeg and Opaskwayak Cree Nation public meetings were taped and a written transcript of the proceedings will be produced for placement in the Manitoba Conservation public registry. Cree language translation was provided at the Nisichawayasihk Cree Nation meeting. Audio equipment could not be arranged for the Nisichawayasihk Cree Nation meeting. Written summaries of each meeting were prepared within three days of each meeting and were posted on the Clean Environment Commission Web site.

Attendance

Over 220 individuals representing a wide range of interests including First Nations, environmental organizations, environmental consultants, businesses, government employees and students attended the public meetings. Attendance at the meetings was estimated as follows: Thompson (45 or 21%), Nisichawayasihk Cree Nation (45 or 21%), Opaskwayak Cree Nation (50 or 23%) and Winnipeg (80 or 35%) (Table 1).

Table 1 – Estimated attendance at public meetings

LOCATION	NUMBER
Thompson	45
Nisichawayasihk Cree Nation	45
Winnipeg	80
Opaskwayak Cree Nation	50
Total	220

Of the estimated 220 attendees, 147 people registered with their name and address, and/or requested a copy of the summary report. The majority of the registrants were from Winnipeg (40%), Nisichawayasihk Cree Nation (23%), Opaskwayak Cree Nation (14%), South Indian Lake (7%), Thompson (5%) and Moose Lake (4%), and 7% were undeclared. Some of the attendees were present at more than one meeting and several attended all of the meetings.

First Nation representation included Nisichawayasihk Cree Nation, Opaskwayak Cree Nation, Mosakahiken Cree Nation, Tataskweyak Cree Nation, O-Pipon-Na-Piwin Cree Nation and York Factory First Nation.

Public Comments

A total of 23 written submissions and oral statements were either recorded from the four public meeting locations or were received by mail, fax or e-mail (Table 2). A list of the submissions and statements is provided in Appendix B. The issues raised, points discussed and comments made in the submissions and statements are summarized below. Summaries of the public meetings are available on the Manitoba Clean Environment Web site (www.cecmanitoba.ca).

Table 2 – Submissions and statements received

LOCATION	WRITTEN SUBMISSIONS	ORAL STATEMENTS	TOTAL
Thompson	1	0	1
Nisichawayasihk Cree Nation	4	3	7
Winnipeg	3	4	7
Opaskwayak Cree Nation	1	2	3
Other (mail, fax or e-mail	5	-	5
Total	14	9	23

Thompson

There was only one written submission at the Thompson public meeting, which was presented by the South Indian Lake Community Council. The Council's submission identified several issues including the impact of past hydroelectric development on Southern Indian Lake, the need to conduct meaningful consultations with First Nations and expanding the scope of the environmental assessment to include the Churchill River Diversion and Southern Indian Lake. The submission also mentioned including the *Consultation on Sustainable Development Implementation Report* recommendations, Manitoba's water policies and proposed *Environment Act* amendments in the guidelines. Recommendations addressing these issues were presented as part of the submission.

Questions and comments raised during the public meeting addressed the perceived narrow geographic scope of the draft EIS guidelines, the nature of First Nation participation in drafting the guidelines, the public consultations during the environmental assessment process, the

people who would provide Aboriginal traditional knowledge and the methods to be used for the cumulative effects assessment.

Nisichawayasihk Cree Nation

There were four written submissions and three oral statements presented at the Nisichawayasihk Cree Nation public meeting. The written submissions were from the Nisichawayasihk Cree Nation Chief and Council and included information on the Manitoba Hydro-NCN Agreement-in-Principle, Nisichawayasihk Cree Nation concerns about developments and respect for the environment, benefits of the projects to the community, particularly the need to create jobs and economic development opportunities. Discussion centred on the use of Aboriginal traditional knowledge in the planning and assessment of the project. Traditional ecological knowledge was defined as a sub-set of Aboriginal traditional knowledge. The oral statements addressed the use of Aboriginal knowledge in the conduct of surveys, positive attitude of the community towards the future, importance of community members attending the public meetings and the large amount of work that remains to be carried out. Concern was expressed about sickness in the community, poor drinking water quality and the high cost of electricity.

Questions asked and comments made during the public meeting related to the understandability of the EIS guidelines, Nisichawayasihk Cree Nation involvement in preparing the draft guidelines, definitions of Aboriginal traditional knowledge, incorporating traditional knowledge into the guidelines and use of modern tools to map traditional sites.

Winnipeg

Three written submissions and four oral statements were presented at the Winnipeg public meeting. The written submissions were from the Canadian Nature Federation, O-Pipon-Na-Piwin Cree Nation and Tataskweyak Cree Nation while the York Factory First Nation, Manitoba's Future Forest Alliance and the Canadian Parks and Wilderness Society provided oral statements.

The Canadian Nature Federation presentation commented on the utility of the Clean Environment Commission meetings, access to information/public registry contents, lack of a policy context and framework in the guidelines, Manitoba government procedures, extension of the review period, Aboriginal and First Nation rights, reference to protected areas in the guidelines, need for a federal review panel and the general scope of the environmental assessment. A series of recommendations were provided on each of these topics.

The O-Pipon-Na-Piwin Cree Nation representative commented on the importance of recognizing South Indian Lake as a First Nation, respecting the Cree world view, observing the importance of Aboriginal traditional knowledge and including both physical and cultural heritage in the guidelines. Also mentioned were expanding the geographic scope to include Southern Indian Lake, adequacy of baseline studies and environmental monitoring, importance of the cumulative effects assessment and the application of proposed amendments to Manitoba's *Environment Act*.

The Tataskweyak First Nation representative discussed the effects of hydroelectric developments on the Nelson River and provided a series of recommendations dealing with provisions of the Northern Flood Agreement, full application of Aboriginal traditional knowledge, consideration of tangible and intangible aspects of cultural heritage, adherence to *Canadian Environmental Assessment Act* requirements and the need to take a holistic ecosystem approach. It was stressed that scientific or technical knowledge should not be used to invalidate Aboriginal traditional knowledge

The Manitoba's Future Forest Alliance statement called for an examination of the EIS guidelines in relation to the principles and guidelines of sustainable development, and recommendations of the *Consultation on Sustainable Development Implementation Report*, particularly relating to the topics of development assessment and review, public participation and federal-provincial relations. Requirements for an economic needs analysis and full cost accounting of the generating station project as well as Manitoba Hydro's fiduciary responsibility for meaningful consultation with First Nations were also mentioned.

The York Factory First Nation representative commented on traditional ecological knowledge, cumulative effects of other hydroelectric projects in the watershed, future decommissioning and rehabilitation of the projects, impact of past hydroelectric developments on water quality, and the effects of the Wuskwatim projects on traditional resources as well as treaty and negotiated rights.

The Canadian Parks and Wilderness Society proposed referral of the projects to a federal review panel, combining the generation and transmission proposals into one project and addressing Pimicikamak Cree Nation's concerns. The Society member identified a number of specific concerns including defining the need for the project, considering alternative means of achieving the need, determining the total cost of the projects including externalities and conducting demand side management analysis. Other concerns expressed were consideration of the principles and

guidelines of sustainable development, assessment of climate change effects, expansion of the scope of the cumulative effects assessment and reference to the potential effects of mercury.

Questions asked and comments made during the public meeting included requests for examples of good Environmental Impact Statements from other projects, possible additions to scope of the assessment and recognition of South Indian Lake as a First Nation. The discussion topics included the application of Aboriginal traditional knowledge, and referencing provincial sustainability indicators and principles and guidelines of sustainable development in the EIS guidelines.

Opaskwayak Cree Nation

There were two oral statements and one written submission presented at the Opaskwayak Cree Nation public meeting. Mosakahiken First Nation representatives provided oral statements in which a number of questions and concerns were raised about the proposed projects. Questions related to why the generation project is being proposed, effects of the projects on First Nation lands, stewardship of the land, licencing the projects if the effects are significant, compensation to Tolko Manitoba for loss of cutting areas, location of the transmission lines, and the type of equipment that will be used to clear trees. It was noted that the loss of cutting areas could affect Mosakahiken First Nation contractors if replacement areas are not accessible to their members.

A Nisichawayasihk Cree Nation representative presented a written submission, which addressed comments made at the Thompson and Winnipeg meetings on South Indian Lake concerns, Tataskweyak Cree Nation statements regarding the Northern Flood Agreement, a possible joint federal-provincial panel review of the Wuskwatim projects and the draft EIS guidelines for the Conawapa project.

During the Opaskwayak Cree Nation public meeting a number of questions and comments were raised related to location of Moose Lake lands relative to the transmission line, effects of the transmission line on forestry operations, impact of past hydroelectric developments on Moose Lake, translation of public consultation materials into Cree, a proposed public consultation program, scope of the environmental assessment, a potential diversion of water south from the generation project, geographic extent of the study area and ability of First Nations to stop the project.

Other Submissions

Five other submissions were received by mail, fax or e-mail from Manitoba Hydro and Nisichawayasihk Cree Nation, Time to Respect Earth's Ecosystems (T.R.E.E.), Manitoba's Future Forest Alliance, the Town of Snow Lake and the City of Thompson.

The Manitoba Hydro and Nisichawayasihk Cree Nation submission commented on traditional ecological knowledge and traditional knowledge, land and resource-related agreements, geographic scope of the EIS and scoping in relation to the *Canadian Environmental Assessment Act*. The submission also noted a number of specific wording and other detailed comments.

The T.R.E.E. submission proposed a review of the environmental assessment on the Wuskwatim projects by a federally appointed panel, inclusion of all topics identified for the scoping phase of the Conawapa and Bipole III projects, and consideration of the need for and alternatives to the Wuskwatim generation and transmission projects.

The submission by Manitoba's Future Forest Alliance recommended that the federal government conduct a full panel review of the Wuskwatim projects. The Alliance also recommended that the EIS guidelines include issues identified in the draft Conawapa guidelines, examine the need and justification for the projects in relation to Manitoba's draft sustainable development energy strategy and consider Manitoba's *Sustainable Development Act* requirements. An in-depth analysis of potential effects of climate change on the projects and provision of participant funding to participants were also recommended.

The Town of Snow Lake submission provided information on natural features, protected pictographs and developments in the region south of Snow Lake. The Town noted that the most opportune and direct route for the Wuskwatim transmission line is across the Grass River, west of the Wekusko Falls Lodge and east of Trampling Lake.

The City of Thompson submission posed questions on the impact that the Wuskwatim generation station would have on the flows (e.g. maximum daily fluctuations) of the Burntwood River near Thompson, and the effects of fluctuations on soil erosion and riverbank stability. Concern was also expressed with respect to public safety along the Burntwood River during the summer and winter related to water level fluctuations.

Observations and Conclusions

General

During the public meetings on the draft EIS guidelines on the Wuskwatim projects the Clean Environment Commission heard the comments and concerns of First Nation communities, environmental organizations, municipal governments and individuals. Many of these comments and concerns are documented in the written submissions and are noted in the meeting summaries. For the most part, the comments and concerns dealt specifically with the draft guidelines and are reflected in the following observations and conclusions.

There were also a number of issues raised that did not fall within the Clean Environment Commission's mandate to review the guidelines. These included existing agreements such as the Northern Flood Agreement and the Manitoba Hydro - Nisichawayasihk Cree Nation Agreement-in-Principle, the environmental assessment process established by federal and provincial legislation and agreement, improvements to Manitoba Conservation's public registry and ongoing negotiations between First Nations and the governments. Comments and concerns expressed on these issues are documented in the submissions received and are reported on in the meeting summaries.

Participant groups generally viewed the public meetings on the draft EIS guidelines for the Wuskwatim projects as a positive step in the overall environmental assessment process. They commented that public input to the guidelines early in the process is important. Both the provincial and federal levels of government are to be congratulated for their cooperative efforts in this regard.

The following observations and conclusions reflect the comments and concerns expressed by First Nations, environmental groups, municipal governments, individuals and others received during the public review period. The observations and subsequent recommendations on the EIS guidelines are provided to enhance the comprehensiveness and effectiveness of the resulting environmental assessment, and to foster a sustainable environment and economy in northern Manitoba.

The following observations and conclusions are presented in a logical sequence from general to specific aspects of the draft EIS guidelines. The order of presentation does not imply any relative importance or ranking of the issues.

Understandability

The draft EIS guidelines for the Wuskwatim projects deal with a variety of technical matters related to the developments and the environment, and a complex environmental assessment process. A common concern expressed about the guidelines was that they were difficult to understand. Not all participants understood the overall purpose or intent of the guidelines, the technical nature of the content or the meaning of the "new" words. Environmental assessment terminology (e.g. scope, mitigation, cumulative effects, residual effects and environmental protection plan) was not understood by many people and was subject to various interpretations. Furthermore, terms such as "traditional ecological knowledge" are interpreted differently by various organizations and individuals, and need to be defined.

The description of the Wuskwatim projects, while likely adequate for the consultants undertaking the environmental assessment, was not sufficient for the participants to determine whether the guidelines addressed the environmental assessment requirements satisfactorily. The regulatory requirements and process descriptions were not clearly understood by the participants and this requires further explanation in the guidelines.

Historically, draft EIS guidelines have been prepared for a technical audience and not for public review. Use of a more informative writing style and inclusion of a list of definitions or a glossary of terms for future EIS guidelines will likely address many of the public concerns about understandability. The definitions should be consistent with established federal and provincial legislation and policies, and should also be stated in a clearly understandable manner. Inclusion of maps and diagrams would assist in the understanding of the projects and the environmental assessment process.

Translation of the guidelines into Cree and provision of a toll-free number or e-mail contact for interested parties to ask questions about the guidelines would also assist in their understandability, particularly by community elders and lay people.

Prescriptiveness

The degree to which the draft EIS guidelines for the Wuskwatim projects prescribe exactly what the proponent must do to carry out the required studies, conduct the environmental assessment and prepare the EIS report was subject to considerable discussion during the public meetings. It was explained that being overly prescriptive could either limit the studies and the assessment to a minimum level required by the guidelines or expand the scope of the studies and assessment beyond what is reasonable or effective in terms of level of detail, cost and time. The approach taken for the Wuskwatim projects is understood to involve the provision of sufficient direction to ensure that the proponent conducts studies and carries out the environmental assessment based on the predicted effects of the project.

The Commission appreciates this explanation but believes that a greater degree of prescriptiveness is required to address the concerns expressed at the public meetings. These concerns would be addressed by defining the spatial scope of the assessment to include the Churchill-Nelson Rivers watershed in Manitoba or other physically or ecologically definable boundaries, and the effects of past hydroelectric developments in that region. The guidelines need to be written with greater clarity and certainty in terms of what is required by consistently using the words "shall", "must" and "will" and limiting use of the words "could" and "may". In addition, the use of qualifiers such as "to the extent that they are definable" and "where possible" should be avoided as these terms tend to limit innovation and advancement of the practice of environmental assessment.

The EIS guidelines should be more definitive when requiring the proponent to describe or provide information on the project, the environment and the environmental effects. In some cases, descriptive lists are provided and no direction is given on the use or application of the information. To be effective both qualitative and quantitative information is required on the project and the environment.

Environmental Policy Framework

Manitoba has a comprehensive environmental policy framework, which is founded in the *Sustainable Development Act* and is manifested in numerous policy and strategy documents. The framework also includes the recent *Consultation on Sustainable Development Implementation (COSDI) Report* and its recommendations. A consistent message from environmental and First Nation organizations, as well as other concerned parties, was the need

to define Manitoba's environmental policy framework in the EIS guidelines. The framework is required to establish the context for the guidelines, define how the environmental assessment will be carried out and provide a basis for evaluating the EIS report. The following is a list of policy and related documents that were mentioned during the public meetings and/or were presented in the submissions:

- *Consultation on Sustainable Development Implementation (COSDI) Report*
- *Manitoba's Sustainable Development Act*
- *Manitoba's Principles and Guidelines of/for Sustainable Development*
- *Manitoba's Sustainable Development Financial Management Guidelines*
- *Manitoba's Sustainable Development Code of Practice*
- *Manitoba's Sustainable Development Strategy*
- *Manitoba's Sustainability Indicators*
- *Manitoba's Action Plan for a Network of Protected Areas*
- *Manitoba's Sustainable Development Energy Strategy (draft)*
- *Manitoba's Land and Water Strategy*
- *Manitoba's Water Policies*
- *Manitoba's Caribou Strategy*
- *Report of the Manitoba Climate Change Task Force*
- *Canadian Biodiversity Strategy*
- *North American Waterfowl Management Plan*
- *Policy of Fish Habitat Management*
- *Canadian Environmental Assessment Agency Comprehensive Study Guide*
- *Canada-Manitoba Agreement on Environmental Assessment Cooperation*
- *Proposed amendments to Manitoba's Environment Act*
- *Act to Amend the Canadian Environmental Assessment Act* (Bill C-19)

Specific reference to these documents in the EIS guidelines will provide implicit guidance to the proponent on describing the biophysical, socio-economic, cultural other aspects of the environment, and identifying, describing and qualifying effects of the Wuskwatim projects on the environment. Assessment of the projects in relation to Manitoba's principles and guidelines of sustainable development, and the use of provincial sustainability indicators will also increase the likelihood of achieving sustainable projects over the longer term.

Hydroelectric Development in Northern Manitoba

How the proposed Wuskwatim projects relate to overall hydroelectric development in northern Manitoba was discussed at each of the public meetings. There is a general absence of information in the guidelines on existing and proposed hydroelectric developments in the region including generation stations, transmission lines and other related infrastructure. While not essential for the environmental assessment, this lack of information on hydroelectric development appeared to contribute to public mistrust concerning the proposed projects. For example, one group suggested that the generation project would justify construction of Bipole III, while another group believed that dams on the Burntwood River would be used to divert water to the south.

An informative description of current hydroelectric developments in northern Manitoba, role of the Wuskwatim projects within this scenario and plans for additional developments over the reasonably foreseeable future would improve the general level of public understanding. Maps, diagrams and other graphic aids would be beneficial in interpreting the descriptions. The information is also required for the effective identification, assessment and evaluation of cumulative environmental effects of the proposed Wuskwatim projects in combination with other projects and activities in the region.

Wuskwatim Project Description

The description of the Wuskwatim projects in the draft EIS guidelines was criticized at the public meetings in terms of the nature of the information and level of detail provided. Common concerns were the lack of descriptive information on the projects and the absence of maps and diagrams illustrating their location and the areas potentially affected. Individuals noted that it was not possible to make specific comments without knowing the location of First Nation lands, existing developments, protected areas and other land use activities. Provision of descriptive and explanatory information on the project and the environmental setting along with the EIS guidelines would help to alleviate these concerns in the future.

The requirement to clearly define and describe the "need", "purpose" and "alternatives" to the proposed projects in the EIS guidelines was voiced strongly at the public meetings and in the written submissions. Environmental organizations also recommended that demand side management and full cost accounting be addressed in the guidelines. They further specified that the benefit/cost analysis should include externalities such as environmental values and costs.

One Project – One Assessment

Several of the presentations suggested that the two Wuskwatim projects should be combined into a single project and the environmental assessment be carried out on the combined generation/transmission project. It was argued that the transmission line is an undertaking in relation to the generating station, which is defined as a physical work under the *Canadian Environmental Assessment Act*. The concept of "one project – one assessment" which is supported under that *Act* as good environmental assessment practice was also mentioned. The matter was discussed further in connection with the Canada-Manitoba Agreement on Environmental Assessment Cooperation, which promotes the effective and efficient use of public resources and provides for a cooperative environmental assessment that satisfies the legal requirements of both parties.

The suggestion to combine the Wuskwatim projects into one for the purposes of the environmental assessment being carried out through the cooperative efforts of Canada and Manitoba is fully supported by the Clean Environment Commission.

Scope of the Environmental Assessment

A significant level of concern was expressed at the public meetings about the geographic scope and timeframe for the environmental assessment described in the draft EIS guidelines. Presently, the geographic scope is defined as "those local areas directly impacted by the undertakings associated with the ... Wuskwatim ... projects and also the zones within which there may be environmental effects that are regional or global in their nature".

There appeared to be general support for a defined study area that included the Churchill-Nelson Rivers watershed in northern Manitoba and associated ecological (e.g. caribou range) and administrative (e.g. resource management areas) zones that are directly and indirectly affected by the proposed projects. Limiting the intent and scope of the EIS guidelines to direct effects of the project restricts the spatial and temporal scope of the environmental assessment. Indirect (e.g. secondary, tertiary, etc.) effects can have far-reaching and long-lasting effects, and tend to have broader spatial and temporal boundaries.

The Clean Environment Commission appreciates the requirement for federal interests to define the scope of the project and the assessment in terms of the *Canadian Environmental Assessment Act*, but encourages that a broader scope be considered for the Wuskwatim projects.

Environmental Assessment Standards

Another topic that received significant attention at the public meetings was the standard to which the EIS for the Wuskwatim projects should be carried out. It was strongly recommended by environmental organizations that the final EIS guidelines for the Conawapa hydroelectric project become the base reference point for the Wuskwatim EIS. Environmental assessments of the Voisey's Bay mine and mill in Newfoundland and Labrador, and the proposed decommissioning of the Whiteshell Laboratories in Manitoba were also mentioned as reference standards.

Submissions by First Nation and environmental organizations recommended that the EIS guidelines should contain sufficient direction to ensure that the Wuskwatim environmental assessment is at least consistent with other environmental assessments in Manitoba and compatible with best practices for environmental assessment. Several participants noted that dams are significant projects and the environmental assessment of Wuskwatim projects should be carried out accordingly. In this regard the guidelines should contain reference to the Ontario Ministry of the Environment *Guide to Environmental Assessment Requirements for Electricity Projects* (2001) and to the *Report on the World Commission on Dams* (2000) by the United Nations Environmental Program.

Environmental Assessment Methods

Several of the submissions presented at the public meetings mentioned the use of Geographic Information System (GIS) technology, overlay mapping and other methods used in environmental assessment. The draft EIS guidelines do not specify the use of such methods in relation to the Wuskwatim projects. The methods are commonly employed to identify and assess environmental effects and are also applied in conjunction with Aboriginal traditional knowledge approaches.

Accordingly, the Commission believes that the draft EIS guidelines would benefit from reference to standard environmental assessment methods to identify and assess project and cumulative environmental effects, compare among alternatives and evaluate the significance of residual effects. Such methods should include but not be limited to Aboriginal traditional knowledge, GIS, computer modelling, overlay mapping, matrices and linkage or network diagrams.

Aboriginal Traditional Knowledge

The term Aboriginal traditional knowledge (also traditional knowledge, traditional ecological knowledge and Aboriginal knowledge) was the subject of significant discussion during the public

meetings. The matter was also mentioned in many of submissions presented to the Clean Environmental Commission by First Nation and environmental organizations and others. There were several related concerns with respect to the definition, application and acceptance of Aboriginal traditional knowledge or traditional ecological knowledge.

Firstly, there were several definitions provided during the public meetings for Aboriginal traditional knowledge and traditional ecological knowledge:

1. The Nisichawayasihk Cree Nation (NCN) considers traditional knowledge to be:

   - the observation and experience of the land;
   - Aboriginal law regarding how the environment works;
   - the understanding of NCN's place in the world – how things are connected, including spirituality;
   - the relationship to the land;
   - the goals and aspirations of NCN;
   - the outlook on the proposed project – concerns, acceptability;
   - NCN's identity and culture;
   - the stewardship of the land; and
   - a base for natural resource management.

   Nisichawayasihk Cree Nation feels that traditional knowledge comes from Elders and others, both traditional and modern.

2. The Tataskweyak Cree Nation define Aboriginal traditional knowledge as:

   "a body of knowledge possessed by Aboriginal people reflecting their experience, understanding, wisdom, values, beliefs, norms and priorities governing their relationship with Mother Earth".

3. The O-Pipon-Na-Piwin Cree Nation provided the following definition of Aboriginal traditional knowledge as defined in the Voisey's Bay Environmental Assessment Panel Report (1999):

   "the knowledge, understanding and values held by Aboriginal people that bear on the impacts and of the undertaking and their mitigation. This knowledge is based on personal observation, collective experience and oral transmission over generations".

Secondly, First Nation representatives emphasized that traditional ecological knowledge is one part of Aboriginal traditional knowledge, which has a broader or more holistic approach. The sole use of traditional ecological knowledge was viewed as a narrow approach and that its use would ignore other aspects of Aboriginal knowledge.

Thirdly, positions were expressed with respect to the application of traditional ecological knowledge in the context of the EIS guidelines in particular and the environmental assessment in general. First Nation representatives recommended giving traditional ecological knowledge the same value as scientific or engineering knowledge. The representatives suggested that Aboriginal traditional knowledge be used to identify environmental effects, evaluate significance and make decisions. They also noted that statements in the guidelines that require conclusions including those relating to Aboriginal knowledge to be backed up by credible technical information are not acceptable to them.

The Clean Environment Commission believes that definitions of Aboriginal traditional knowledge, traditional ecological knowledge and other variations and the proper use of these terms in the EIS guidelines will alleviate most of the concerns expressed. This may be assured by consulting with First Nation organizations to confirm that the definitions and applications are acceptable.

Public Consultation

Concerns about the public consultation process were a common thread at the public meetings and in the submissions received. Notwithstanding the proactive approach to consultations on the draft EIS guidelines, the public, including First Nations, environmental groups, businesses, municipal governments and individuals all expressed their desire to be consulted further about the proposed projects and be informed on how they might be affected. The geographic scope of public consultations was of particular concern to residents of South Indian Lake, Moose Lake, York Factory and other northern communities.

The draft EIS guidelines includes reference to a public consultation and involvement plan but the guidelines do not specify the scope of the plan, what the plan is to contain, or the strategies, tools or techniques to be employed. To be effective, the plan should be prepared to the standard defined by the Canadian Environmental Assessment Agency *Guide to the Preparation of a Comprehensive Study* (1997). Reference to the Canadian Standards Association *Guide to Public Involvement* (1996) should also be included. The public consultation and involvement plan

should also be provided to the Project Administration Team for review as soon as practical to ensure that an acceptable level of public consultation has been and will be carried out.

It is understood that the project proponents, and the federal and provincial governments are fully aware of their fiduciary responsibility to consult with First Nations and others who may be affected by the proposed Wuskwatim projects. Further, the fact that Manitoba Hydro and a First Nation may be partners does not preclude that responsibility.

Past Hydroelectric Development Impacts

The Clean Environment Commission heard many strongly worded statements regarding the effects of past hydroelectric developments on the Churchill-Nelson Rivers and Saskatchewan River systems. The effects of these developments on area residents, lands and resources and quality of life were expressed at the public meetings and in the submissions. Residents of South Indian Lake, Moose Lake and Nisichawayasihk Cree Nation, in particular, commented on how hydroelectric developments affected water quality, caused shorelines to erode, decimated the commercial fishery, forced evacuations and changed their way of life. They were sceptical about promises about the future based on their experiences in the past. It was also mentioned at the meetings that the proposed Wuskwatim projects provide an opportunity to rectify some of the ongoing effects of past developments such as shoreline erosion.

The effects of past hydroelectric developments need to be documented as a reference point for identifying and assessing the effects of the proposed Wuskwatim projects. The impact of existing projects and activities is also a prerequisite for the identification and assessment of cumulative environmental effects associated with the Wuskwatim projects and other projects and activities in the region. These requirements are also discussed in the following sections on environmental and cumulative effects.

Baseline Conditions

The term "baseline conditions" does not appear in the draft EIS guidelines for the Wuskwatim projects. This observation was made by several of the participants at the public meetings as well as by the Commission. An initial step in most environmental assessments is the establishment of baseline conditions including the effects of existing developments. The effects of the proposed development activities can then be identified and measured relative to baseline conditions. Since environmental conditions change over time for a variety of reasons, environmental, socio-

economic and other indicators are monitored over time so that effects of the project can be determined on a comparative basis.

The EIS guidelines for the Wuskwatim projects should require that the proponent define baseline conditions in the area affected, identify environmental, socio-economic and other indicators of change, describe the effects of the project using these indicators, and prescribe follow-up programs to monitor changes over the longer term. The indicators should be simple and measurable, and they should represent important environmental, social, economic, cultural or other relevant components (e.g. Valued Ecosystem Components). Reference should be made in the guidelines to the Final Report of the Federal Ecological Monitoring Program (1992) concerning the effects of past hydroelectric developments in the region.

The EIS guidelines should also require that an evaluation be carried out on the biophysical, socio-economic and cultural information base in terms to determine if there are any critical gaps or deficiencies that would limit the effectiveness of the environmental assessment. Any information gaps or deficiencies should be addressed as part of the environmental assessment and not through environmental monitoring as suggested in the draft guidelines.

Environmental Effects

The draft EIS guidelines specify the identification of potential biophysical and socio-economic effects directly related to the Wuskwatim projects. It was noted by several participants that this requirement limits the scope of the assessment to those effects directly resulting from the project. To be effective, the guidelines should also require consideration of the indirect biophysical, socio-economic and cultural effects of the projects. The guidelines would also benefit from a definition of environmental effect that is consistent with the *Canadian Environmental Assessment Act*, the *Consultation on Sustainable Development Implementation Report* and the proposed amendments to Manitoba's *Environment Act*.

The direct effects of the Wuskwatim generation project on mobilizing mercury into the food chain and the indirect effects on fish, fisheries, economic conditions and human health is an example of how direct and indirect effects may be manifested. Other indirect effects that should be identified based on comments made at the public meetings include effects of the project on social conditions (i.e. employment, health, housing, culture) in the Aboriginal communities.

The draft guidelines require that the proponent assess the effects of the project on the current use of lands and resources for traditional purposes by Aboriginal people. The guidelines should also require an assessment of the effects on the use of lands and resources for all purposes by both Aboriginal and non-Aboriginal persons.

Several participants at the public meetings commented that the draft guidelines do not consider the effects of the developments on physical and cultural heritage in a manner that is consistent with the *Canadian Environmental Assessment Act* and the Canadian Environmental Assessment Agency *Reference Guide on Physical and Cultural Heritage Resources* (1996). It was also suggested that the guidelines should include reference to tangible and intangible cultural resources including spiritual values.

The draft guidelines presently require that actions to be taken to mitigate, eliminate or compensate for residual adverse environmental effects. This requirement should be consistent with accepted environmental assessment practices where a residual effect is the effect remaining after the application of mitigation measures. The residual effect is then used to evaluate significance.

Cumulative Environmental Effects

The Clean Environment Commission commends the government for including consideration of cumulative effects of the Wuskwatim projects in the draft EIS guidelines. Several participants at the public meetings also commented favourably in this regard. In support of this requirement the guidelines should contain guidance on how the cumulative effects assessment is to be carried out and reported upon. Such guidance is provided in the Canadian Environmental Assessment Agency's *Operational Policy Statement on Cumulative Environmental Effects* (1999) and *Cumulative Effects Assessment Practitioner's Guide* (1997).

The Commission also believes that the guidelines should define what is meant by cumulative environmental effects, identify methods to identify and assess cumulative effects and describe how cumulative effects are to be considered and reported on in the EIS. Reference should also be provided to cumulative effects assessment requirements identified in the *Canadian Environmental Assessment Act*, *Consultation on Sustainable Development Implementation Report* and proposed amendments to Manitoba's *Environment Act*.

Climate Change

The recent *Report by the Manitoba Climate Change Task Force* (2001) provides recommendations to the Government of Manitoba and Manitoba Hydro to lead by public policy and practice in reducing greenhouse gas emissions. This recommendation should be addressed in the EIS guidelines with specific requirements to identify and assess the effects of the project on climate change and the effects of climate change on the project, such as the potential for decreased water levels in reservoirs.

Environmental Monitoring

Several of the submissions received at the public meetings included reference to the importance of environmental monitoring during and after construction of the Wuskwatim projects. Various concerns were mentioned relating to follow-up monitoring and what it entailed. Monitoring is understood to include evaluation of the effectiveness of the environmental assessment in identifying and mitigating adverse effects, assuring that mitigation is implemented and effective, and providing for the identification of unforeseen environmental effects.

There is an opportunity to involve First Nations in the proposed monitoring program for the Wuskwatim projects. In this regard, consideration should be given to the formation of an independent monitoring structure with First Nation leadership or involvement to conduct and report on environmental monitoring programs for the Wuskwatim and other hydroelectric projects in the region. Such structures have been put in place for other large projects (e.g. Diavik Diamonds Project)

The Clean Environment Commission fully supports the requirement for Environmental Protection Plans to ensure implementation of the mitigation measures, environmental monitoring, licence terms and conditions, and other follow-up requirements.

Recommendations

The recommendations listed below are provided to the Minister of Conservation for consideration by the Project Administration Team in finalizing the EIS guidelines for the Wuskwatim generation and transmission projects.

1. General

The Clean Environment Commission congratulates Manitoba and Canada for providing the public with an opportunity to review the draft EIS guidelines for the Wuskwatim projects through a process that included a Commission sponsored public meeting component, and recommends that the practice be adopted as an integral part of the environmental assessment process for future development projects of this nature in Manitoba.

2. Understandability

Draft EIS guidelines that are submitted for public review should be written in a style that is understandable by all parties, particularly by people not familiar with environmental assessment terminology. In addition, the guidelines should include a list of definitions or glossary of terms. The definitions or terms must be consistent with Canada's and Manitoba's environmental assessment legislation and policies, as well as best environmental assessment practice.

The Clean Environment Commission supports the suggestion that public consultation materials such as the draft guidelines be made available in Cree and other Aboriginal languages as necessary. In addition, a toll free number or e-mail should be provided to answer questions concerning the guidelines.

3. Prescriptiveness

The EIS guidelines should provide a balance between being overly prescriptive and not prescriptive enough. The guidelines should give clear direction and outline the results and level of detail expected of the proponent. At the same time, the guidelines should allow the proponent to be adaptive and innovative in the identification, assessment, mitigation and evaluation of environmental effects.

The Clean Environment Commission believes that a greater degree of prescriptiveness is required to address the concerns expressed by those parties potentially affected by the proposed

projects. In this regard, the guidelines need to be written with greater clarity and certainty in terms of what is required by consistently using the words "shall", "must" and "will".

4. Environmental Policy Framework – The EIS guidelines

The EIS guidelines should clearly outline the environmental policy framework for Manitoba. The framework should include applicable legislation, policies, guidelines and other documents that must be considered in the environmental assessment of the Wuskwatim projects. At a minimum the proponent should be requested to consider requirements of Manitoba's *Sustainable Development Act*, the principles and guideline of sustainable development, recommendations outlined in the *Consultation on Sustainable Development Implementation Report* and proposed amendments to Manitoba's *Environment Act* concerning requirements for an effects assessment, which significantly broaden the assessment.

5. Hydroelectric Development in Northern Manitoba

The Clean Environment Commission recommends that the EIS guidelines for the Wuskwatim projects include a requirement to describe the history, present status and future direction of hydroelectric development in Manitoba. This is necessary for the public to understand the context of the proposed projects and for the proponent to complete the assessment of cumulative environmental effects.

6. Wuskwatim Project Description

The EIS guidelines should require that the proposed Wuskwatim generation and transmission projects be described in sufficient detail with maps and illustrations so that the public can understand the nature of the proposals and appreciate the areas potentially affected.

The EIS guidelines should also specify that the "need", "purpose" and "alternatives" to the projects must be provided in a manner consistent with requirements under the *Canadian Environmental Assessment Act.*

7. One Project – One Assessment

The Clean Environment Commission strongly recommends that the Wuskwatim generation and transmission projects be assessed as one project and that the EIS guidelines be revised accordingly.

8. Scope of the Environmental Assessment

The scope of the environmental assessment should be defined in the EIS guidelines to include the geographic area directly and indirectly affected by the generation and transmission projects. The Churchill-Nelson Rivers watershed in northern Manitoba and associated ecological and administrative boundaries that are directly and indirectly affected by the proposed projects may define this area. Furthermore, the guidelines should include reference to both direct and indirect effects of the Wuskwatim projects, both positive and negative.

9. Environmental Assessment Standards

The EIS guidelines for the Wuskwatim projects should contain sufficient direction to ensure that the environmental assessment is at least consistent with best practice for environmental assessment. The guidelines should also provide for the continual improvement of environmental assessment practice by incorporating the knowledge and experience from previous similar assessments from across Canada and other countries.

10. Environmental Assessment Methods

The EIS guidelines should specify the methodology to be used for the environmental assessment of the Wuskwatim projects. The methodology specified should include a balance of both scientific and Aboriginal traditional knowledge approaches.

11. Aboriginal Traditional Knowledge

The Clean Environment Commission strongly recommends that the terms Aboriginal traditional knowledge, traditional ecological knowledge, traditional knowledge, Aboriginal knowledge and other variations be defined in the EIS guidelines and that the terms be used appropriately. The definitions should also recognize the Cree world view. First Nation organizations should be consulted to confirm that the definitions are acceptable.

It is further recommended that the EIS guidelines consider both Aboriginal traditional knowledge and scientific knowledge in the conduct of the environmental assessment, particularly in the identification and assessment of environmental effects and the evaluation of significance.

12. Public Consultation

The Clean Environment Commission recommends that the public consultation and involvement plan identified in the EIS guidelines be prepared to specifications in the *Guide to the Preparation of a Comprehensive Study* (1997) as provided by the Canadian Environmental Assessment Agency, and that the plan be approved by the Project Administration Team before implementation.

13. Past Hydroelectric Development Impacts

The EIS guidelines should require documentation of the effects from past hydroelectric developments as a reference point for identifying and assessing the effects of the proposed Wuskwatim projects and for the assessment of cumulative environmental effects. The documentation used should be in the domain and readily available to the proponent.

14. Baseline Conditions

The EIS guidelines should direct the proponent to define baseline conditions in the area affected, identify environmental, socio-economic, cultural and other indicators of change, describe the effects of the project using these indicators, and prescribe follow-up programs to monitor and document changes over the longer term.

15. Environmental Effects

Environmental effects should be defined in the EIS guidelines consistent with the *Canadian Environmental Assessment Act*, the *Consultation on Sustainable Development Implementation Report* and the proposed amendments to Manitoba's *Environment Act*, particularly as it relates to effects assessment. Both direct and indirect biophysical, socio-economic, cultural and other relevant effects of the projects should be identified, assessed and mitigated in the environmental assessment of the Wuskwatim projects. Indirect effects of the projects including those on health, housing and culture in the Aboriginal communities should be assessed.

16. Physical and Cultural Heritage Effects

The EIS guidelines should ensure that the effects of the projects on physical and cultural heritage (including both tangible and intangible aspects) are assessed according to guidance in the Canadian Environmental Assessment Agency *Reference Guide on Physical and Cultural Heritage Resources* (1996).

17. Cumulative Environmental Effects

The Clean Environment Commission recommends that the EIS guidelines should define cumulative environmental effects, identify methods to assess cumulative effects and describe how cumulative effects are to be considered and reported on in the environmental assessment.

18. Climate Change

The Clean Environment Commission strongly recommends that the EIS guidelines include requirements for the proponent to consider the effects of the proposed Wuskwatim projects on climate change as well as the effects of climate change on the projects.

19. Environmental Monitoring

Consideration should be given to the formation of an independent monitoring body to conduct and report on environmental monitoring programs for the Wuskwatim and other hydroelectric projects in the region.

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APPENDIX A

DRAFT GUIDELINES FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT FOR THE WUSKWATIM GENERATION PROJECT

DECEMBER 2001

(PAGE 1)

DRAFT GUIDELINES FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT FOR THE WUSKWATIM TRANSMISSION PROJECT

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DRAFT GUIDELINES FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT FOR THE WUSKWATIM GENERATION PROJECT

DECEMBER 2001

1. INTRODUCTION

1.1 BACKGROUND

Manitoba Hydro and the Nisichawayasihk Cree Nation (NCN) are currently considering the development of the Wuskwatim hydroelectric generating station and associated infrastructure in the NCN Resource Management Area (RMA). The Wuskwatim Generating Station, to be located at Taskinigup Falls, would provide approximately 200 MW of new electrical generating capacity to Manitoba Hydro's system. The general purpose of the proposed development is to take advantage of export opportunities over the medium term.

Discussions between Manitoba Hydro and NCN regarding the future Wuskwatim Generation Project (as well as a potential development at the Notigi Control Structure) have been ongoing for several years. Article 8 of the 1996 Agreement (signed by NCN, Manitoba Hydro, Manitoba, and Canada) sets out a process for NCN and Manitoba Hydro to discuss potential future developments that could affect the NCN RMA and NCN members. In 1997, NCN and Manitoba Hydro established a working group to facilitate ongoing consultation regarding the proposed developments. NCN and Manitoba Hydro are currently considering potential partnership arrangements for the development of the Wuskwatim Generation Project, should it proceed. An agreement-in-principle, which describes the partnership arrangement, has been jointly prepared by NCN and Manitoba Hydro and was signed on September 25, 2001.

Among other things, Article 8 of the 1996 Agreement requires that Manitoba Hydro consult with NCN to identify issues of concern to the First Nation and to provide detailed information on the expected positive and negative effects of any project in the NCN RMA. To address these obligations, NCN and Manitoba Hydro jointly selected a study team in late 1999 to conduct the biophysical and socio-economic studies required to provide sufficient information to conduct an environmental assessment of the proposed development. Following a series of scoping meetings held with NCN and Manitoba Hydro officials in early 2000, the study team designed and implemented a preliminary study plan, which is referred to as the Joint Study Program (NCN Manitoba Hydro: Joint Study Program, updated August 2001). The overall objectives of the Joint Study Program are reported as follows:

- to address the concerns and issues raised by NCN and Manitoba Hydro;
- to provide environmental and socio-economic information that can be used in the project planning phase to avoid or minimize impacts and, where those impacts cannot be avoided or minimized, to address compensatory issues;
- to provide sufficient information to conduct an environmental assessment of the proposed project and prepare an Environmental Impact Statement; and
- to provide information on the existing environment in sufficient detail to allow for post-

project monitoring.

In September 2001, the study team drafted a scoping document that provided useful background to the Project Administration Team (PAT) in the development of these Draft Guidelines for the Preparation of an Environmental Impact Statement for the Wuskwatim Generation Project.

1.2 REGULATORY REQUIREMENTS AND PROCESS

The Wuskwatim Generation Project will require a comprehensive-study level environmental assessment under *The Canadian Environmental Assessment Act.* As well, the project is a Class 3 development as is defined in the *Classes of Development Regulations* under *The Manitoba Environment Act.*

Under the provisions of the *Canada-Manitoba Agreement on Environmental Assessment Cooperation*, the Parties have agreed that, where both governments have an environmental assessment responsibility for a proposed project, a cooperative environmental assessment will be undertaken. Accordingly, these Draft Guidelines for the Preparation of an Environmental Impact Statement for the Wuskwatim Generation Project have been developed to address specific issues that Manitoba and Canada require to be considered in the environmental assessment of the project. The Project Administration Team will finalize the draft guidelines after consideration of public comments and input received from the Federal/Provincial Technical Advisory Committee (TAC).

1.3 INTENT AND SCOPE OF THE ENVIRONMENTAL ASSESSMENT

INTENT:

The intent of preparing the Environmental Impact Statement (EIS) will be to:

- describe the Wuskwatim Generation Project and the environment in which it is to exist;
- identify potential bio-physical and socio-economic effects directly related to the Wuskwatim Generation Project;
- describe the use of scientific analysis of ecosystem effects used in the assessment and Traditional Ecological Knowledge (TEK), local knowledge, and the experience of aboriginals and other sectors of the public considered by the study team;
- describe the extent to which the use of TEK and the use of valued ecosystem components (VEC) will assist in judging the significance of the effects on the well being of the environment and the communities within the area affected by the project;
- describe proposed actions to be taken to mitigate, eliminate or compensate for residual adverse environmental effects;

- propose mechanisms for follow-up monitoring of the Wuskwatim Generation Project; and

- provide a description of the anticipated environmental effects associated with a decommissioning and rehabilitation scheme for the Wuskwatim Generation Project.

It is intended that the Environmental Impact Statement for the Wuskwatim Generation Project shall incorporate and reflect the ***Principles of Sustainable Development*** as contained in ***Towards a Sustainable Development Strategy for Manitobans*** and the policies under ***The Land and Water Strategy.***

SCOPE:

The environmental assessment for the Wuskwatim Generation Project shall include consideration of the environmental effects of all undertakings associated with the site preparation, construction, operation and the final disposition of all components of the proposed Wuskwatim hydro-electric generating station, including any required infrastructure development. The assessment must consider:

- the purpose of the project; and
- alternative means of carrying out the project that are technically and economically feasible.

The scope of the environmental assessment shall include examination of:

- potential changes to the environment that may result from the Wuskwatim Generation Project, including consideration of effects to:
  - land, water and air – including all layers of the atmosphere;
  - the biological environment, including terrestrial and aquatic ecosystems – all organic and inorganic matter and living organisms;
  - present and planned resource use, including land and water; and
  - human health, socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes by aboriginal persons, or any structure, site or thing that is of historical, archaeological, paleontological or architectural significance that will be affected by any changes to the environment caused by the project;

- the implications of the Wuskwatim Generation Project for land and resource-related agreements;

- the environmental effects of potential malfunctions or accidents that may occur in connection with the project;

- the environmental effects of any alternative means of carrying out the project that will be considered as part of the assessment;

- to the extent that they are definable, the cumulative environmental effects of the Wuskwatim Generation Project that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

- the effects of the influx of workers, equipment and materials on residents, land and resources of the region;
- technically and economically feasible measures that would mitigate any significant adverse environmental effects of the project;

- the adequacy of measures proposed to mitigate adverse environmental effects of the project and to compensate for residual adverse effects, where appropriate;
- any change to the project that may be caused by the environment;

- the need for, and requirements of, any follow-up program in respect of the project; and

- the capacity of renewable resources, if any, that are likely to be significantly affected by the project.

The study area, i.e. the geographic scope of the investigations, shall include those local areas directly impacted by the undertakings associated with Wuskwatim Generation Project and also the zones within which there may be environmental effects that are regional or global in their nature.

The assessment for transmission lines related to the Wuskwatim Generation Project and their ancillary components will be addressed separately in an associated EIS document.

2. PUBLIC CONSULTATION AND INVOLVEMENT PLAN

Details of the overall public consultation process for the environmental assessment should be described at the outset in a public involvement plan. The plan should recognize all interested members of the public and describe the various means to provide for their participation in the assessment process. Generally, the public should include: Aboriginal peoples; other local residents; community groups; environmental groups; the private sector; municipal governments; and other interested parties. The public involvement plan should be included in the environmental impact statement (EIS) and the results of the public's input evaluated.

The EIS must describe the community consultation program that has been undertaken with respect to the project, including the following:

- the role of community consultants in the consultation program;
- the use of various communication tools to provide information to NCN members and those of other communities, including newsletters, television broadcasts, and briefing documents; and
- the use and frequency of Open Houses, community meetings, school presentations, and other meetings, that were employed to provide information to the community(ies) consulted.

In addition, efforts made to involve organizations and persons residing beyond the project area in issue identification and problem resolution should be documented and evaluated in the EIS.

3. PROJECT DESCRIPTION

OVERVIEW OF MANITOBA HYDRO'S SYSTEM COMPOSITION

Describe the overall hydro-generating station system composition, insofar as it is relevant to the site preparation, construction, operation and the final disposition of all components of the Wuskwatim Generating Station.

SITE PREPARATION

Describe all undertakings associated with preparing for construction at the site. Detailed descriptions of timing and the methods associated with the various undertakings are required including surveying, clearing, test drilling, establishing dump and borrow areas, setting up camps and work areas, and the development of the infrastructure requirements to access and service the site. This would include providing:

- topographical maps and aerial mosaics of suitable scale showing the location of the proposed generating station, related access road, work camp, borrow and disposal sites, power source and utility corridors; and

- a description of the extent of clearing, excavation, quarrying and earthworks required to prepare for construction of the powerhouse, identification of borrow sites for construction materials such as sand, gravel, clay and stone, and the proposal for removal of waste materials including transportation methods.

CONSTRUCTION

Describe all elements of the proposed Wuskwatim project. Detailed descriptions of timing and the methods proposed for the various undertakings related to the construction of the generating station and related facilities will be required including the following:

- plans and descriptions of any existing works and the proposed dam including dikes, spillway, cofferdams, power facilities, intake and discharge channels and structures;

- maps of the existing and proposed reservoir area, an indication of the anticipated changes in reservoir area as a result of the project, the boundaries of the reservoir area at both high and low water levels on the Wuskwatim Lake;

- a description of the proposed construction methods that could have an effect on the environment such as those required for placement and removal of cofferdams, underwater or near-water blasting (if required), large scale clearing, grading or

earth removal and disposal, including a discussion of possible alternative construction methods;

- an estimate of the size and composition of the workforce required during different times of construction;
- a description of the living accommodations and servicing required for camps provided for the construction workers;
- an analysis of the need for a construction-phase waste disposal ground, and the specific site requirements;
- a description of the recycling program to be in-place during the construction phase of the project, with specific reference to waste oil and other potentially hazardous or recyclable materials;
- a description of the proposed environmental surveillance and monitoring proposed during construction;
- a description of the proposed construction schedule; and.
- subsequent removal of camp facilities and clean up of construction infrastructure.

OPERATION

Describe how the Wuskwatim project would be operated in the context of the Churchill River Diversion. A discussion of river flows and levels with and without the Wuskwatim project in place should be provided. The description will include:

- planned, average hourly discharges at the generating site;
- average hourly forebay water level elevation under a range of flow conditions;
- average hourly tailrace water level elevation under a range of flow conditions; and
- average hourly water level elevation under a range of flow conditions at several downstream locations where water level effects are expected to occur.

Describe how the proposed operation of the generating station would affect the existing operating regime along the river and its relationship to existing regulatory licences/approvals and agreements.

Describe waste disposal practices and long-term facility recycling practices in-place during the operation of the project.

Provide a description of the progressive decommissioning practices that will occur during the operation of the project, with specific reference to infrastructure that would no longer be required after the construction phase.

Describe the size and composition of the proposed labour force involved in the operation and maintenance of the generating station.

FINAL DISPOSITION

Provide a general description of plans for decommissioning the proposed generating station project at the end of its operational life, including any plans for rehabilitating the sites of the project facilities.

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

Describe the existing environmental setting for the proposed project. This will include a broad overview of the local area and the zones within which there may be environmental effects that are regional or global in their nature. This description is intended to provide a context for a detailed understanding of the potential effects of the project.

PHYSICAL ENVIRONMENT

- general climate conditions with sufficient data provided to predict the effect of the project on climate;
- local air quality potentially affected by the project;
- local and regional land and geology;
- existing range of flows and water levels in the context of the operation of the Churchill River Diversion (CRD) and assorted water level and flow constraints;
- ice conditions, including changes during the winter and variability from year to year;
- existing shoreline environment and the rate of shoreline erosion and recession based on long term monitoring programs; and
- nature and extent of existing sediment deposition and shoreline debris.

AQUATIC ENVIRONMENT

Water Quality

- sufficient detail regarding the pre-project water quality parameters to predict the effect of the project on water quality and to compare post project water quality conditions.

Lower Trophic Levels

- sufficient detail regarding existing primary producers and decomposers to provide a basis to predict the potential effect(s) of the project on energy (food) production.

Aquatic Invertebrates

- sufficient detail respecting the existing species composition and abundance of aquatic invertebrates required in order to assess the overall productivity of the aquatic eco-system including fish populations and their range.

Fish Habitat

- sufficient data on bathymetric mapping, habitat classification and quantification within the study area required to provide a basis for predicting project effects and to quantify the actual effects of the project on fish habitat.

Fish Populations

- sufficient data regarding species composition and relative abundance, movements and migration patterns, habitat use and fish quality (mercury and heavy metal levels/fish health/palatability) to predict the effect of the project on fish populations within the study area.

TERRESTRIAL ENVIRONMENT

Vegetation

- information on plant communities, "Species at Risk", and "Rare Species" that may be affected by the project, medicinal plants, forest resources, type(s) of vegetation to be flooded and cleared should be provided in sufficient detail to predict the effect of the project on vegetation in the study area. Additionally, information should be collected regarding wood volume removed from available harvest within Tolko Industries Ltd. FML Area, in order to predict the effect of the project on Tolko's assigned wood volume.

Wildlife and Wildlife Habitat

- animal species (birds and mammals, plus available data for microorganisms, insects, reptiles and amphibians), populations, habitat and seasonal use patterns;
- threatened and endangered animal species;
- important ecological communities representative of the study area by key species;
- migratory populations;
- known woodland caribou and moose wintering calving areas.

- any animal species listed in Manitoba's *Endangered Species Act* or in COSEWIC; and
- sufficient information on wildlife populations and wildlife habitat in the study area to predict, avoid and mitigate to the extent practicable the effects of the project on wildlife habitat and populations in the study area.

SOCIO-ECONOMIC ENVIRONMENT

Resource Use

- domestic harvesting of resources including fishing, hunting, trapping, and gathering medicinal and other plants and berries and fuel wood by Aboriginal groups;
- commercial use of resources by Aboriginal and other groups, including commercial fishing, sport fishing and hunting, outfitting, mining, forestry, and accommodating tourism and eco-tourism; and
- sufficient detail regarding domestic harvesting and commercial use of resources to predict project related effects.

Economy

- a general description of the economic base of Aboriginal and other communities potentially affected by the project including the state of the labour force, employment, unemployment, and a profile of existing economic sectors; and
- sufficient detail regarding the existing economy of the region to predict the effect of the project on the economy of Aboriginal and other affected communities.

Infrastructure and Services

- general description of the infrastructure and services of Aboriginal and other related communities affected by the project in sufficient detail to predict the affect of the project on infrastructure and services of Aboriginal and other affected communities.

Personal, Family and Community Life

- general description of the personal, family and community life of Aboriginal and other communities potentially affected by the project including population and demographic profile, outdoor recreation and travel, aesthetics, health status and health issues, way of life, culture and spirituality and community cohesion and organization; and
- sufficient detail should be provided to predict the effect of the project on personal, family and community life.

HERITAGE RESOURCES

- historic land use and occupancy;
- archaeological sites and culturally important sites, including shoreline sites that could potentially be affected by erosion;
- location of potential burial sites (if any);

- a description of archaeological sites and culturally important sites located on or near shoreline areas that could potentially be affected by erosion, using the work of Historic Resources Branch as the basis for this description; and
- the ranking of archaeological sites in order of importance.

5. ENVIRONMENTAL AND SOCIO-ECONOMIC EFFECTS AND MITIGATION

Provide information on all environmental effects associated with the Wuskwatim Generation Project. Both positive and adverse environmental effects should be described. The following criteria should be used to evaluate the significance of adverse effects:

- nature of the effect;
- magnitude of the impact;
- duration of the impact;
- frequency of the impact;
- reversibility of the impact;
- temporal boundaries (short or long term);
- spatial boundaries (project site, local area or regional); and
- ecological context {(sensitivity of valued ecosystem components (VEC) to environmental disturbance)}.

The following criteria should be used to determine the likelihood of significance of the effects:

- probability of occurrence; and
- scientific uncertainty.

The environmental and socio-economic effects and associated mitigation should relate to each phase of the project including site preparation, construction and post construction, operation, maintenance and eventual decommissioning and should assess all components of the environment in the context of section (4.) the DESCRIPTION OF THE EXISTING ENVIRONMENT of this document. The assessment should consider scientific analysis of ecosystem effects, along with TEK, local knowledge and available experience in determining the significance of potential effects. Mitigation measures to manage or avoid adverse effects should be described for these components and for each undertaking in relation to the project. Cumulative effects assessment (CEA) should form an integral part the environmental and socio-economic assessment. Specific and detailed reference should be made to evaluating the effects of the project on Manitoba's Protected Areas Initiative.
All assessment conclusions should be supported by technical information based on experience in Manitoba and elsewhere. Any deficiencies in the information about potential effects should be clearly noted and addressed as stated in the ENVIRONMENTAL MONITORING section (7.) of this document.

6. RESIDUAL EFFECTS

Describe the nature and extent of any residual environmental effects of the project, a characterization as to whether residual environmental effects are significant or insignificant, and

the rationale for such classification. Provide a detailed plan for responding to any known or predicted residual effects, and provide a procedure for identifying and responding to effects that were not predicted or foreseen.

7. ENVIRONMENTAL MONITORING

Provide a detailed description of the proposed monitoring activities for effects on the physical, aquatic, terrestrial and socio-economic environments arising from the site preparation, construction, operation, and eventual decommissioning of the project. Describe the equipment to be used, the parameters to be measured, the methodology and frequency of measurement and the mechanism for reporting results of proposed monitoring of the environmental conditions affected by the Wuskwatim Generation Project.

If regulatory approval for the project is provided, and prior to construction, a project specific Environmental Protection Plan (EPP) should be developed. The EPP would design and commit Manitoba Hydro to a long term monitoring program that would encompass both the construction and operational phases of the project in order to confirm predictions of effects and to determine whether unexpected effects are occurring. The EPP should be developed to accomplish the following goals:

- To facilitate the mitigation of environmental effects throughout the full-life cycle of the project by providing field construction and operating personnel with clear instructions on the mitigation measures to be implemented and on the appropriate lines of communication and means of reporting to be followed;

- To incorporate issues and concerns identified by NCN, including protocols put in place by the First Nation;

- To identify modifications to construction methods or schedules, summarize environmental sensitivities and mitigation actions, list emergency response plans and reporting protocols, describe a closure plan for aggregate quarries, including mitigation of potential hazards to public safety and mitigation to address land reclamation concerns;
- To provide specific information on waste management practices to be utilized during the construction phase of the project, including all liquid and solid wastes generated; and

- To monitor construction practices to ensure that the work proceeds in accordance with the EPP.

8. TECHNICAL REFERENCE

All assessment conclusions shall be backed up by credible technical information. Describe the primary sources of information used to conduct the environmental assessment of the proposed project. This information shall include:

- technical studies of similar facilities and processes which are operating elsewhere;
- original studies performed by qualified engineers or scientists commissioned by the proponent specific to the Wuskwatim Generation Project;

- identification of facility design documents prepared by qualified engineers as they become available; and
- scientific reports and papers on topics relevant to the Wuskwatim Generation Project.

Credible analysis and documentation must support all conclusions of "no or insignificant effect".

9. REPORT FORMAT

The Environmental Impact Statement (EIS) shall include an executive summary, to be written with a minimum of technical terminology and to include a glossary of terms. Deficiencies in scientific evidence should be identified, including areas where there is no evidence specific to Manitoba.

The information in the EIS should maximize the use of maps, charts, diagrams and photographs for presentation. Maps and diagrams should be presented at a common scale, appropriate to represent the level of detail considered, and where possible, allowing for direct overlay for ease of reference. Specifically, maps indicating zones of effect on land and water use and habitat areas shall be on maps of a common scale.

DRAFT GUIDELINES FOR THE PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT FOR THE WUSKWATIM TRANSMISSION PROJECT

DECEMBER 2001

1. INTRODUCTION

1.1 Background

Manitoba Hydro and the Nisichawayasihk Cree Nation (NCN) are currently considering the development of the Wuskwatim Generation Project and associated infrastructure in the NCN Resource Management Area (RMA). Associated with the generation project, transmission facilities, both in and beyond the NCN RMA, will be required. The Wuskwatim Transmission Project facilities would provide for the transmission of power from the proposed Wuskwatim hydroelectric generating station to the existing Manitoba Hydro electrical transmission system. At the same time, the project would also provide transmission system improvements that are independent of the requirements of the proposed generating station.

The Wuskwatim Transmission Project proposes the development of new transmission lines and a transformer/switching stations required in order to link the proposed electric generator to the existing transmission system. To accomplish this a transmission sub-station would be required at the Wuskwatim generating station site. This new sub-station would provide for voltage transformation and switching. At the sub-station, electricity would be received from the generators and transformed to higher voltages that are necessary for transmission into the existing Manitoba Hydro system.

New 230 kV transmission lines would connect the sub-station at the Wuskwatim site to other stations on Manitoba Hydro's transmission system. The points of connection to the existing system would be at Thompson, at a proposed new transformer/switching station south of the city to be called Birchtree Station, near Snow Lake, at the existing Herblet Lake Station on the north side of the community, and at The Pas, at the existing Rall's Island Station. Manitoba Hydro advises that the proposed Birchtree Station and transmission line connections between Thompson, Herblet Lake Station and Rall's Island Station would be required in the future, independent of the development of the Wuskwatim Generation Project, to improve the existing regional electrical-transmission system.

Discussions between Manitoba Hydro and NCN regarding the future Wuskwatim Generation Project, as well as a potential development at the existing Notigi Control Structure, have been ongoing for several years. Article 8 of a 1996 *Agreement* signed by NCN, Manitoba Hydro, Manitoba, and Canada sets out a process for NCN and Manitoba Hydro to discuss potential future developments that could affect the NCN RMA and NCN members.

In 1997, NCN and Manitoba Hydro established a working group to facilitate ongoing consultation regarding the proposed developments. NCN and Manitoba Hydro are currently considering potential partnership arrangements for the development of the Wuskwatim Generation Project, should it proceed. The Agreement in Principle, which describes the

partnership arrangement, was jointly prepared by NCN and Manitoba Hydro and was signed on September 25, 2001.
Among other things, Article 8 of the 1996 *Agreement* requires that Manitoba Hydro consult with NCN to identify issues of concern to the First Nation and to provide detailed information on the expected positive and negative effects of any project in the NCN RMA. To address these obligations, NCN and Manitoba Hydro jointly selected a study team in late 1999 to conduct the biophysical and socio-economic studies required and to provide sufficient information to conduct an environmental assessment of the proposed development. Following a series of scoping meetings held with NCN and Manitoba Hydro officials in early 2000, the study team designed and implemented a preliminary study plan, which is referred to as the Joint Study Program (NCN Manitoba Hydro: Joint Study Program, updated August 2001).

The Joint Study Program is concerned primarily with the Nelson House RMA and emphasizes potential concerns and issues associated with the generating station development. The related transmission facilities, although included under the Joint Study Program, would extend beyond the RMA in order to provide connections to the existing Manitoba Hydro transmission system. The corresponding site selection and environmental assessment (SSEA) activities for the transmission facilities would be subject to the same general objectives and principles, but would extend geographically beyond the RMA and would include consultation with a number of potentially affected communities and interests other than NCN.

In October 2001 the study team drafted a scoping document that provided useful background to the Project Administration Team (PAT) in the preparation of these Draft Guidelines for the Preparation of an Environmental Impact Statement for the Wuskwatim Transmission Project.

1.2 REGULATORY REQUIREMENTS AND PROCESS

The Wuskwatim Generation Project is a Class 2 development as is defined in the *Classes of Development Regulations* under Manitoba's *The Environment Act* and may require a screening or possibly be part of a comprehensive-study level environmental assessment under *The Canadian Environmental Assessment Act.*

Under the provisions of the *Canada-Manitoba Agreement on Environmental Assessment Cooperation*, the Parties have agreed that, where both governments have an environmental assessment responsibility for a proposed project, a cooperative environmental assessment will be undertaken. Accordingly, these Draft Guidelines for the Preparation of an Environmental Impact Statement for the Wuskwatim Transmission Project have been developed to address specific issues that Manitoba and Canada require to be considered in the environmental assessment of the project. The Project Administration Team will finalize the draft guidelines after consideration of public comments and input received from a Federal/Provincial Technical Advisory Committee.

1.3 INTENT AND SCOPE OF THE SITE SELECTION AND ENVIRONMENTAL ASSESSMENT

INTENT:

The intent of preparing the Environmental Impact Statement (EIS) will be to:

- describe the Wuskwatim Transmission Project;

- identify and characterize the environment of the study area within which the Wuskwatim Transmission Project is to exist;

- identify potential bio-physical and socio-economic effects directly related to the Wuskwatim Transmission Project;

- describe the use of scientific analysis of ecosystem effects used in the assessment and Traditional Ecological Knowledge (TEK), local knowledge, and the experience of aboriginals and other sectors of the public considered by the study team;

- describe the extent to which the use of TEK will assist in judging the significance of the effects on the well being of the environment and the communities within the area affected by the project;

- describe proposed actions to be taken to mitigate, eliminate or compensate for residual adverse environmental effects;

- propose mechanisms for follow-up monitoring of the Wuskwatim Transmission Project; and

- provide a description of the anticipated environmental effects associated with a decommissioning and rehabilitation scheme for the Wuskwatim Transmission Project.

It is intended that the Environmental Impact Statement for the Wuskwatim Transmission Project shall incorporate and reflect the ***Principles of Sustainable Development*** as contained in ***Towards a Sustainable Development Strategy for Manitobans*** and the policies under ***The Land and Water Strategy.***

SCOPE:

The environmental assessment for the Wuskwatim Transmission Project shall include consideration of the environmental effects of all undertakings associated with the site preparation, construction, operation and the final decommissioning of all components of the proposed Wuskwatim Transmission Project facilities, including any required infrastructure development. The assessment must consider:

- the purpose of the project; and
- alternative means of carrying out the project that are technically and economically feasible.

The scope of the environmental assessment shall include examination of:

- potential changes to the environment that may result from the Wuskwatim Transmission Project, including consideration of effects to:
  - land, water and air – including all layers of the atmosphere;

- the biological environment, including terrestrial and aquatic ecosystems – all organic and inorganic matter and living organisms;
- present and planned resource use, including land and water; and
- human health, socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes by aboriginal persons, or any structure, site or thing that is of historical, archaeological, paleontological or architectural significance that will be affected by any changes to the environment caused by the project;

- the implications of the Wuskwatim Transmission Project for land and resource-related agreements;

- the environmental effects of potential malfunctions or accidents that may occur in connection with the project;

- the environmental effects of any alternative means of carrying out the project that will be considered as part of the assessment;

- to the extent that they are definable, the cumulative environmental effects of the Wuskwatim Transmission Project that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

- the effects of the influx of workers, equipment and materials on residents, land and resources of the region;

- technically and economically feasible measures that would mitigate any significant adverse environmental effects of the project;

- the adequacy of measures proposed to mitigate adverse environmental effects of the project and to compensate for residual adverse effects, where appropriate;

- any change to the project that may be caused by the environment;

- the need for, and requirements of, any follow-up program in respect of the project; and

- the capacity of renewable resources, if any, that are likely to be significantly affected by the project.

The study area, i.e. the geographic scope of the investigations, shall include those local areas directly impacted by the undertakings associated with Wuskwatim Transmission Project and also the zones within which there may be environmental effects that are regional or global in their nature.

2. PUBLIC CONSULTATION AND INVOLVEMENT PLAN

Details of the overall public consultation process for the environmental assessment should be described at the outset in a public involvement plan. The plan should recognize all interested members of the public and describe the various means to provide for their participation in the

assessment process. Generally, the public should include: Aboriginal peoples; other local residents; community groups; environmental groups; the private sector; municipal governments; and other interested parties. The public involvement plan should be included in the environmental impact statement (EIS) and the results of the public's input evaluated.

The EIS must describe the community consultation program that has been undertaken with respect to the project, including the following:

- the role of community consultants in the consultation program;
- the use of various communication tools to provide information to NCN members and those of other communities, including newsletters, television broadcasts, and briefing documents; and
- the use and frequency of Open Houses, community meetings, school presentations, and other meetings, that were employed to provide information to the community (ies) consulted.

In addition, efforts made to involve organizations and persons residing beyond the project area in issue identification and problem resolution should be documented and evaluated in the EIS.

3. PROJECT DESCRIPTION

OVERVIEW OF MANITOBA HYDRO'S TRANSMISSION SYSTEM

Provide an overview of Manitoba Hydro's existing transmission system, with emphasis on facilities within the study area. Describe the purpose of the proposed transmission facilities in relation to transmission requirements for power to be generated by the Wuskwatim project, and to system requirements generally.

SITE PREPARATION

Describe all undertakings associated with preparing for construction at the site. Detailed descriptions of timing and the methods associated with the various undertakings are required including surveying, clearing, test drilling, establishing dump and borrow areas, setting up camps and work areas, and the development of the infrastructure requirements to access and service the site(s). This would include providing:

- topographical maps and aerial mosaics of suitable scale showing the location of the proposed route and transformer stations, related access roads, water crossings and staging areas;
- description and/or sketches of typical station site clearing dimensions and rights-of-way clearing widths;
- description of approvals required prior to rights-of-way clearing; and

- a description of the extent and method of clearing, excavation, quarrying and earthworks required to construct the transmission line and identification of borrow sites for construction materials and the removal and transportation methods;

CONSTRUCTION

Describe all elements of the proposed Wuskwatim Transmission Project. Detailed descriptions of the timing and the methods proposed for the various undertakings related to the construction of the transmission project and related facilities will be required including the following:

- construction methods to be used to cross creeks, streams, lakes and wetlands including: setback of transmission towers from shorelines; widths of buffer zones; and structure types, including advantages and disadvantages of alternative types;
- a description of the proposed construction methods that could have an adverse effect on the environment and measures proposed to minimize environmental effects of construction activities;
- an estimate of the size and composition of the workforce required during different times of construction;
- a description of the living accommodations and servicing for temporary work camps provided for the construction workers;
- a description of the recycling program to be in-place during the construction phase of the project, with specific reference to waste oil and other potentially hazardous or recyclable materials;
- a description of the proposed environmental surveillance and monitoring proposed during construction and clean up of construction infrastructure upon completion of construction; and
- a description of the proposed construction schedule.

OPERATION AND MAINTENANCE

The description will include:

- maintenance plans for transmission facilities, sites and rights-of ways;
- methods proposed for vegetation management; and
- quantities, control and disposal of waste materials produced by operation and maintenance programs.

DECOMMISSIONING

Provide a description of plans for decommissioning any temporary infrastructure or facilities related to the construction of the project.

Provide a general description of plans for decommissioning the transmission line at the end of its operational life.

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

Describe the existing environmental setting for the proposed project. This will include a broad overview of the area potentially affected by the project and the zones within which there may be environmental effects that are regional or global in their nature. This description is intended to provide a context for a detailed understanding of potential routes for transmission lines and the potential effects of the project.

Data provided on the aquatic, terrestrial, socio-economic environment and heritage resources should be compiled, including local and traditional knowledge and provided in sufficient detail to select alternative routes and to predict and avoid or mitigate, to the extent practicable, adverse effects of a preferred route.

PHYSICAL ENVIRONMENT

- general climate conditions with sufficient data provided to predict the effect on the project;
- local air quality potentially affected by the project; and
- physiography and surficial geology of the study area.

AQUATIC ENVIRONMENT

Hydrology and Water Quality

- sufficient detail of hydrology and pre-project water quality parameters to predict the effect of the project on hydrology and water quality conditions.

Aquatic Population and Habitat

- sufficient data regarding the relative abundance, distribution and key habitat of fish populations within the study area to provide a basis for predicting project effects and to quantify the actual effects of the project on fish habitat and fish populations.

TERRESTRIAL ENVIRONMENT

Vegetation

- information on plant communities, "Species at Risk", and "Rare Species" that may be affected by the project, medicinal plants, location and extent of forest resources, type(s) of forest resources to be cleared and salvaged should be provided in sufficient detail to predict the effect of the project on vegetation in the study area. Additionally, information should be collected regarding wood volume to be removed during rights-of-way clearing within Tolko Industries Ltd. FML Area, in order to predict the effect of the project on Tolko's assigned wood volume.

Wildlife and Wildlife Habitat

- animal species (birds, mammals, amphibians, invertebrates), populations, habitat and seasonal use patterns;
- threatened and endangered animal species;
- important ecological communities representative of the study area by key species;
- migratory populations;
- known woodland caribou and moose wintering calving areas;
- any animal species listed in Manitoba's *Endangered Species Act* or as determined by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC); and
- sufficient information on wildlife populations and wildlife habitat in the study area to predict, avoid and mitigate to the extent practicable the effects of the project on wildlife habitat and populations in the study area.

SOCIO-ECONOMIC ENVIRONMENT

Resource Use

- domestic harvesting of resources including fishing, hunting, trapping, and gathering medicinal and other plants and berries and fuel wood by Aboriginal groups;
- commercial use of resources by Aboriginal and other groups, including commercial fishing, sport fishing and hunting, outfitting, mining, forestry, and accommodating tourism and eco-tourism;
- sufficient detail regarding domestic harvesting and commercial use of resources to predict project related effects.; and
- location of existing mineral and mining dispositions issued under the authority of *The Mines and Minerals Act*.

Land and Water Use

- general description of land ownership and tenure and the use of waterways by Aboriginal groups and others, including Reserve lands, Treaty Land Entitlement lands, traditional resource management areas, Community Interest Zones, Crown lands and waterways used for the transportation.

Economy

- general description of the economic base of Aboriginal and other communities potentially affected by the project including the state of the labour force, employment, unemployment, and a profile of economic sectors; and
- sufficient detail regarding the existing economy of the region to predict the effect of the project on the economy of Aboriginal and other affected communities.

Infrastructure and Services

- general description of the infrastructure and services of Aboriginal and other related communities affected by the project in sufficient detail to predict the affect of the project on infrastructure and services of Aboriginal and other affected communities.

Personal, Family and Community Life

- general description of the personal, family and community life of Aboriginal and other communities potentially affected by the project including population and demographic profile, outdoor recreation and travel within the Study Area, aesthetics, health status and health issues, way of life, culture and spirituality and community cohesion and organization; and
- sufficient detail should be provided to predict the effect of the project on personal, family and community life.

HERITAGE RESOURCES

- historic land use and occupancy;
- archaeological sites and culturally important sites;
- location of potential burial sites (if any) in areas potentially affected by the project; and
- the ranking of archaeological sites in order of importance.

5. IDENTIFICATION AND COMPARATIVE EVALUATION OF ALTERNATIVE ROUTES

Careful routing and siting of the transmission facilities is critical to avoidance and minimization of the potential adverse effects associated with their development. Accordingly, the identification and comparative evaluation of alternative routes and sites should be thoroughly documented as follows:

- The process of identifying alternative routes should be described and related both to the environmental issues and concerns identified in the course of study area characterization and preliminary consultation, and to the technical and economic requirements of the transmission facilities.

- Comparative evaluation of the alternatives should be based on both regional and site-specific information on biophysical and socio-economic features. Comparative analysis and findings should be documented, as well as the basis of preference used for the proposed facility routes and sites.

- Both the identification and comparison of alternatives should be clearly cross-referenced to issues and concerns identified during the course of community and public consultation as well as TAC reviews. Resultant revisions or refinements to the routes and sites should be detailed and should incorporate the findings of any supplemental research or field reconnaissance undertaken in support of the comparative evaluation.

6. ENVIRONMENTAL AND SOCIO-ECONOMIC EFFECTS AND MITIGATION

Provide information on all the environmental effects associated with the Wuskwatim Transmission Project. Both positive and adverse environmental effects should be described. The following criteria should be used to evaluate and compare the significance of adverse effects of the proposed transmission line routes and station sites:

- nature of the effect;
- magnitude of the impact;
- duration of the impact;
- frequency of the impact;
- reversibility of the impact;
- temporal boundaries (short or long term);
- spatial boundaries (project site, local area or regional); and
- ecological context.

The following criteria should be used to determine the likelihood of significance of the effects:

- probability of occurrence; and
- scientific uncertainty.

The environmental and socio-economic effects and associated mitigation should relate to each phase of the project including site preparation, construction and post construction, operation, maintenance and eventual decommissioning and should assess all components of the environment in the context of section (4.) the DESCRIPTION OF THE EXISTING ENVIRONMENT of this document. The assessment should consider scientific analysis of ecosystem effects, along with TEK, local knowledge and available experience in determining the significance of potential effects. Mitigation measures to manage or avoid adverse effects should be described for these components and for each undertaking in relation to the project. Cumulative effects assessment (CEA) should form an integral part the environmental and socio-economic assessment. Specific and detailed reference should be made to evaluating the effects of the project on Manitoba's Protected Areas Initiative.

All assessment conclusions should be supported by technical information based on experience in Manitoba and elsewhere. Any deficiencies in the information about potential effects should be clearly noted and addressed as stated in the ENVIRONMENTAL MONITORING section (8.) of this document.

7. RESIDUAL EFFECTS

Describe the nature and extent of any residual environmental effects of the project, a characterization as to whether residual environmental effects are significant or insignificant, and the rationale for such classification. Provide a detailed plan for responding to any known or predicted residual effects, and provide a procedure for identifying and responding to effects that were not predicted or foreseen.

8. ENVIRONMENTAL MONITORING

Provide a detailed description of the proposed monitoring activities for effects on the physical, aquatic, terrestrial and socio-economic environments arising from the site preparation, construction, operation, and eventual decommissioning of the project. Describe the equipment to be used, the parameters to be measured, the methodology and frequency of measurement and the mechanism for reporting results of proposed monitoring of the environmental conditions affected by the Wuskwatim Transmission Project.

If regulatory approval for the project is provided, and prior to construction, a project specific Environmental Protection Plan (EPP) should be developed. The EPP would design and commit Manitoba Hydro to a long term monitoring program that would encompass both the construction and operational phases of the project in order to confirm predictions of effects and to determine whether unexpected effects are occurring. The EPP should be developed to accomplish the following goals:

- To facilitate the mitigation of environmental effects throughout the full-life cycle of the project by providing field construction and operating personnel with clear instructions on the mitigation measures to be implemented and on the appropriate lines of communication and means of reporting to be followed;

- To incorporate issues and concerns identified in the public consultation process;

- To identify modifications to construction methods or schedules, summarize environmental sensitivities and mitigation actions, list emergency response plans and reporting protocols, describe a closure plan for aggregate quarries, including mitigation of potential hazards to public safety and mitigation to address land reclamation concerns;

- To provide specific information on waste management practices to be utilized during the construction phase of the project, including all liquid and solid wastes generated; and

- To monitor construction practices to ensure that the work proceeds in accordance with the EPP.

9. TECHNICAL REFERENCE

All assessment conclusions shall be backed up by credible technical information. Describe the primary sources of information used to conduct the environmental assessment of the proposed project. This information shall include:

- technical studies of similar facilities and processes which are operating elsewhere;
- original studies performed by qualified engineers or scientists commissioned by the proponent specific to the Wuskwatim Transmission Project;
- identification of facility design documents prepared by qualified engineers as they become available; and
- scientific reports and papers on topics relevant to the Wuskwatim Transmission Project.

Credible analysis and documentation must support all conclusions of 'no or insignificant effect".

9. REPORT FORMAT

The Environmental Impact Statement (EIS) shall include an executive summary, to be written with a minimum of technical terminology and to include a glossary of terms. Deficiencies in scientific evidence should be identified, including areas where there is no evidence specific to Manitoba.

The information in the EIS should maximize the use of maps, charts, diagrams and photographs for presentation. Maps and diagrams should be presented at a common scale, appropriate to represent the level of detail considered, and where possible allowing for direct overlay for ease of reference.

APPENDIX B
List of Submissions

Meeting	Organization	Speaker	Title/Topic
Thompson	South Indian Lake Community Council	Leslie Dysart	Presentation to Clean Environment Commission
Nisichawayasihk Cree Nation	NCN Chief and Council	David Spence	Clean Environment Commission Visit to Nelson House: Notes for Chief Primrose
	NCN Chief and Council	D'arcy Linklater	Speaking Notes for Councillor Linklater, Clean Environment Commission
	NCN Chief and Council	David Spence	Councillor David Spence Presentation to the CEC on Behalf of the Nisichawayasihk Cree Nation, Nelson House, Manitoba
	NCN Chief and Council	Elvis Thomas	Speaking Notes for Elvis Thomas, Clean Environment Commission
Opaskwayak Cree Nation	NCN	David Spence	Clean Environment Commission Speaking Notes
Winnipeg	Canadian Nature Federation	Gaile Walen Enns	Presentation to Clean Environment Commission Public Meeting Regarding Draft EIS Guidelines for Environment Act Proposal – Wuskwatim Generation Project and Wuskwatim Transmission Project
	O-Pipon-Na-Piwin Cree Nation: South Indian Lake	Chris Baker	Oral Presentation to the Manitoba Clean Environment Commission Public Meeting on Draft Guidelines for the Preparation of an Environmental Impact Statement for the Wuskwatim Generation and Transmission Projects
	O-Pipon-Na-Piwin Cree Nation: South Indian Lake	Chris Baker	Written Submission to the Manitoba Clean Environment Commission Public Meeting on Draft Guidelines for the Preparation of an Environmental Impact Statement for the Wuskwatim Generation and Transmission Projects
	Tataskweyak Cree Nation	Victor Spence	Submission to the Manitoba Clean Environment Commission Regarding the Draft Guidelines for the Preparation of an Environmental Impact Statement for the Wuskwatim Generation Project
Other:	Time to Respect Earth's Ecosystem	Peter Miller	Notice of Environment Act Proposal – Manitoba Hydro – Wuskwatim Generating Project and Transmission Project/Manitoba Conservation Public Registry
	Manitoba Hydro/NCN	Wayne Everett Norman Linklater	Comments of Manitoba Hydro and NCN Regarding Draft Guidelines for the Wuskwatim Generation and Transmission Projects
	Manitoba's Future Forest Alliance	Glen Koroluk	Scoping Meetings for the Development of EIS Guidelines for the Proposed Wuskwatim Generation Station
	Town of Snow Lake	Garry Zamzow	Manitoba Hydro - Wuskwatim Generation Project and Transmission Project
	City of Thompson	Bill Comaskey	Concern about Wuskwatim Generation Project